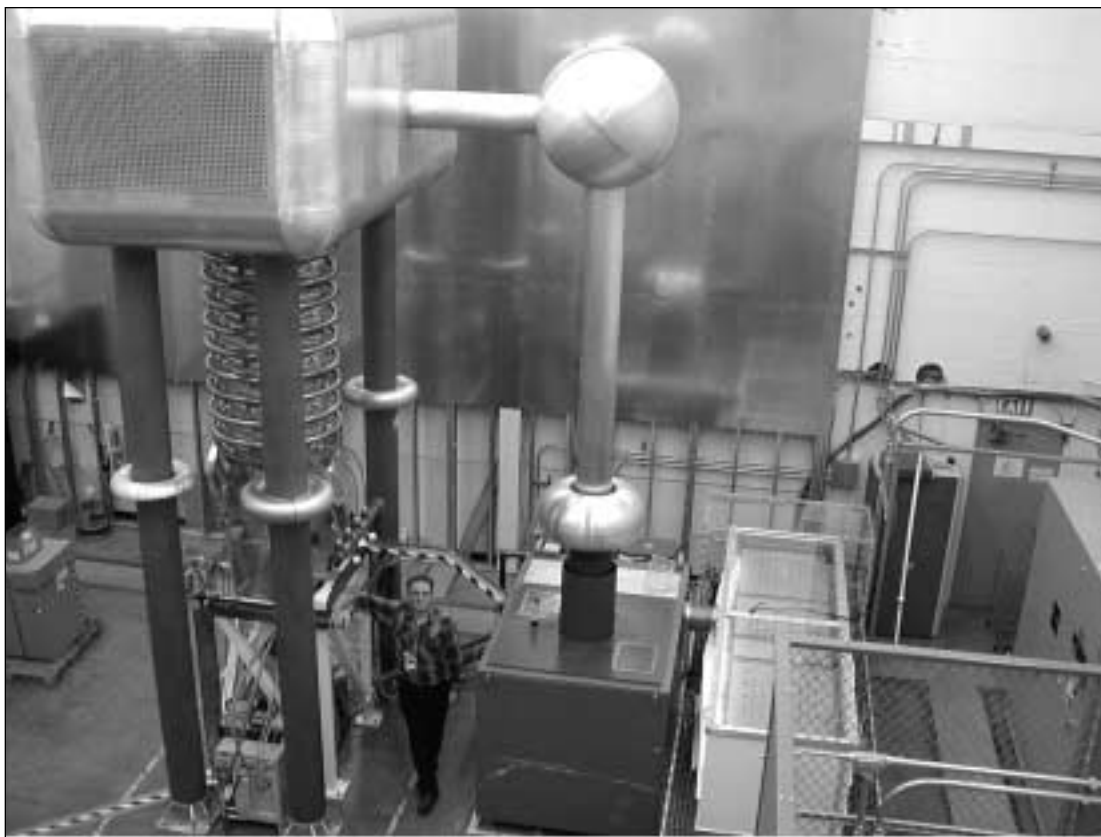


NEWSLINE

Published weekly for employees of Lawrence Livermore National Laboratory

Friday, April 12, 2002

Vol. 27, No. 15



Electrical technician Robert Hall stands next to the injector test stand, known as STS-500, which will be used to develop the technology for heavy ion fusion.

Jolt of energy for fusion research

By Anne M. Stark

NEWSLINE STAFF WRITER

In 20 to 30 years, the energy industry could start building heavy ion fusion power plants that would generate electricity from fusion energy.

A heavy ion fusion power plant uses intense ion beams focused on a small target to create a small thermonuclear reaction.

The Lab's heavy ion fusion group, part of Fusion Energy Programs, is helping to

develop the technology for heavy ion fusion. This effort recently reached a major milestone with the dedication of its injector test stand, otherwise known to the fusion energy physicists as STS-500, a 500-kilovolt ion source test stand in Bldg. 341.

The test stand can generate a 500-kilovolt pulse for 17 microseconds at a rate of once every two to three seconds. The stand uses 10 kilojoules of stored energy to gener-

See **FUSION**, page 7

UC committee to begin interviews for Lab's next director later this month

Interviews of candidates for the Lab's next director will take place later this month.

The candidates will be interviewed by a special advisory committee appointed by the University of California. The committee includes two Lab representatives — Cynthia Nitta of Defense and Nuclear Technologies and AD Hal Graboske — and is chaired by UC President Richard C. Atkinson.

More than 40 applications and nominations were received by the University of California from inside and outside the Lab. A screening committee developed a short list of candidates which the advisory committee reviewed last month. The screening committee was chaired by John Birely, an independent consultant and former assistant to the secretary of defense and associate director for nuclear weapons at Los Alamos National Laboratory, and included Livermore Lab members.

"The screening committee has shown tremendous integrity, thoroughness and thoughtfulness in completing this process," said John McTague, the UC vice president of Laboratory Management and a member of the advisory committee. "I commend each member for their sense of dedication."

McTague also thanked the various Lab members for their participation in the screening process and Lab employees who addressed the advisory committee when it visited the Lab in early march.

"It is important that Lab employees take an active role in the process of finding their next director," he said. "The input they have provided has been informative and useful to the screening and advisory committees."

Atkinson is expected to present his choice for approval by the UC Regents in May.

The finalist will be the Lab's ninth director. Director Bruce Tarter announced last December that he would step down from his position, after leading the Lab for more than seven years, the second longest tenure in the Lab's history (Roger Batzel served the longest, at 17 years). Tarter will take on other assignments at the Lab.

Security challenges underscore importance of materials research

By Don Johnston

NEWSLINE STAFF WRITER

The post September 11 terrorist threat environment has "created an intense and compelling set of concerns" and is challenging the scientific community to develop new countermeasures on "an accelerated timeframe," Deputy Director for Science and Technology Jeff Wadsworth told a plenary session of the Materials Research Society in San Francisco last week.

Wadsworth described the evolution of the

Laboratory's national security missions and called on scientists from the diverse disciplines that make up the materials science community to contribute to the effort to thwart terrorism.

"The war against terrorism is not new but has intensified significantly since September 11. The mission-driven agencies will be the major centers focusing on this war on terrorism," he said. "The science community will be vital in developing new technologies and also in providing honest evaluations about what is, and what is not, possible from scientific and technological viewpoints."

The events of last September underscore the importance of Materials Research Society (MRS) meetings as "a unique forum for exploring the boundaries and intersections of materials science, chemistry, physics, nanoscience, engineering, computing, earth sciences, and more recently, biology," Wadsworth said. "I am very proud to have been an MRS member for many years."

"I believe that as a result of the innovative spirit and multidisciplinary character of MRS,

See **MATERIALS**, page 8



1966: Studying effects of EMP

— Page 3



CIO seeks comments on Windows standard

— Page 5



Net gains from networking

— Page 5



LAB COMMUNITY NEWS

Weekly Calendar

Technical Meeting Calendar, page 4

Monday
15

Take a look at how Mac OS X fits into your desktop productivity, high performance computing, and cyber-security environments at **"Mini Macworld,"** from 9 a.m.-3:30 p.m. in the Bldg. 543 auditorium. The day will feature presentations and vendor displays for Mac and UNIX users and admins, CSOs and those with ISSO/OISSO responsibilities, and scientists and engineers needing affordable high performance UNIX-based computing solutions. Contact: Duane Straub, 2-9774, or Candace Gittins, 4-4952.

Tuesday
16

The Benefits Office is offering a workshop on the fundamental principals of investing, **"Basic Investment Planning and Savings,"** 8:30 a.m.-noon or 1-4:30 p.m. at the Training Center. If you are 10 or more years from retirement, the information provided in this workshop could help enhance your financial security at retirement. Cost of this workshop is \$45. Pre-registration is required. To register, go to the Benefits Office Website at <http://www.llnl.gov/jobs/benefits> and click on Seminars/Workshops or call the Training Center, 4-3849.

Wednesday
17

New sessions of dance and exercise classes begin today. All classes are held in Bldg. 415. Specialty classes include East Coast swing, Salsa, power yoga, gentle yoga, hip hop/funk, new beginnings (for those new to exercise) and water aerobics. Class sizes are limited; sign up in the LLESA office. Most classes are \$30 per six-week session. Contact: LLESA, 2-9402 or 2-9403 for more information.

...

A representative from **Fidelity Investments** will be on-site to meet with employees April 17-18 and May 1-2. Fidelity Investments are available to UC's 403(b) participants in addition to the UC-managed investment funds. For an appointment, call Fidelity at 1-800-642-7131. Be sure to specify you are an LLNL employee.



Spring quarter **Russian language classes** begin April 30. Classes are for beginning, intermediate, and advanced students.

The classes are two hours, once a week, for 14 weeks. The cost is approximately \$700 per student. Please contact Judy Nelson, 2-6535 or nelson9@llnl.gov, for registration forms and for more information.

...

Tickets are now on sale for the **LLESA Marine World family picnic** on Saturday, May 18. The day includes admission to all shows, rides and general attractions, all-you-can-eat picnic lunch and another park admission ticket for the 2002 season. Price is \$25.95/person. Children 2 & under are free. Buy tickets at the Time Zone between 11 a.m. and 3 p.m. before May 15. Contact: LLESA, 2-9035.

Arroyo Mocho cleanup focus of Earth Day

The City of Livermore's Beautification Committee and the community will Celebrate Earth Day on Saturday, April 20, by cleaning up the Arroyo Mocho.

The City of Livermore's Beautification Committee in partnership with the City of Livermore's Public Services Department & Water Resources Division, Boy Scout Troop 931, Livermore Area Recreation & Park District, Livermore-Dublin Disposal, Zone 7, Friends of the Arroyos, and Keep California Beautiful will host the Earth Day 2002-Arroyo Cleanup Project. Volunteers will meet at Mocho Park (located at the corner of Holmes Avenue and Mocho Street) at 9 a.m. and work until noon.

Volunteers will receive educational instruc-

tion about the Arroyo Mocho, packets of wild-flower seeds, food and drinks, and free T-shirts.

Approximately 350 volunteers are expected to participate in the clean up and work to remove debris from the Arroyo Mocho from Stanley Boulevard to Arroyo Road.

The arroyo serves as a flood control channel, is used to recharge the groundwater basin and is valued for natural habitat and wildlife. This is one of many projects happening across the country and intended to raise public awareness and encourage millions of volunteers to improve the quality of our environment in communities from coast to coast.

For more information about the Earth Day 2002 Project, call Ed Murdock at (925) 373-5228.



BRIEFLY

APAC sponsors egg rolls sales

The Chinese American Network Group (CANG) is sponsoring an Egg Roll sale on Thursday, April 18. All sales are on a pre-ordered basis and may be picked up at Bldg. 415 (LLESA), room 103 from 11:40 a.m. to 12:30 p.m.

All proceeds will be applied toward the Asian Pacific American Council (APAC) Scholarship Program.

Egg rolls are \$1 each and are available in regular or vegetarian. Checks should be made out to APCA (not CANG).

Please contact Eric Chow at 2-0552 or chow6@llnl.gov by close of business April 17 to place your orders.

Tamales are back

Amigos Unidos will be taking orders for tamales — \$13/dozen, \$7/half-dozen (pre-ordered) — through May 2 and/or \$14/dozen, \$7.50/half-dozen day of availability.

The tamales may be picked up during Amigos Unidos' Cinco de Mayo celebration, 11:30 to 1 p.m. May 3, in the pool area (more information on this event will be available at a later date).

During the celebration, lunch plates w/drink will be available for \$6.50/each (also available for pre-order.) Lunch includes: chile Colorado, carnitas or tamale; rice and beans,

chips and salsa or two corn tortillas and soft drink.

Orders can be placed with the following people: Irene Ortega, 2-6350; Yahel De La Cruz, 4-3507; Maurice Hernandez, 2-9392; Angela Amaral, 960-0369; Marta Holm, 2-8870; Mark Perez, 4-2842; Jessica Barraza, 2-6750; Michele Cardenas, 3-2796; Alicia Salmeron, 3-0769; Gloria Davalos, 3-1410; Rosa Yamamoto, 2-0454; Dave Castro, 3-7556; Teresa Hauck, 2-8777; Michael T. Martin, 3-6580; Patricia Martinez, 3-9080; Xavier Cabrales, 2-7448; Santiago Parra, 4-2811; Laura Martinez, 2-7037; or Marian Barraza, 3-7063. For more information, contact Yahel De La Cruz, 4-3507, or Maurice Hernandez, 2-9392.

San Joaquin EYH needs volunteers

Volunteers are needed for the pre-planning efforts for the 10th Annual San Joaquin Expanding Your Horizons in Science and Mathematics Conference scheduled for October at the University of the Pacific in Stockton.

Volunteers are needed in the following areas: finance, fund raising, conference program, publicity, media, and volunteer coordinator. For more information or to volunteer, see <http://education.llnl.gov/eyh/> For questions, please contact Cary Gellner, gellner1@llnl.gov or 2-0643.

IN MEMORIAM

Robert Schlinger

Services have been held for Robert A. Schlinger, a Lab retiree who died March 31 at St. Rose Skilled Nursing Facility in Hayward. He was 62.

Schlinger worked as a mechanical engineering tech associate for 20 years, retiring in 1996.

A native of Los Angeles, Schlinger lived in Tracy for 21 years. He enjoyed boating and his motorhome, family gatherings, fishing and caring for stray dogs.

Survivors include his wife, Linda, and his mother.

Contributions in his memory may be made to Tracy Animal Shelter, 370 E. Arbor Ave., Tracy 95376, or a favorite charity.

Newsline

Newsline is published weekly by the Internal Communications Department, Public Affairs Office, Lawrence Livermore National Laboratory (LLNL), for Laboratory employees and retirees.

Contacts:

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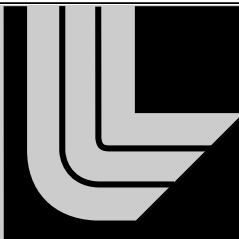
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Printed on recycled paper

1952 – 2002

MAKING HISTORY, MAKING A DIFFERENCE



Electromagnetic pulses: Dealing with transient radio signals

This is an ongoing feature highlighting the Lab's 50-year history. This week we take a look at the year 1966.

The failure of 30 strings of streetlights in Oahu, Hawaii, as a consequence of the STARFISH event in 1962 raised concerns that the electromagnetic pulse (EMP) generated by a nuclear burst could cause widespread damage. The phenomena needed to be understood. Modeling and experimentation to study the effects of transient electromagnetic pulses has been a research focus at the Laboratory ever since—supporting both the weapons program and Department of Defense.

In 1966, a paper by a Livermore researcher, K. S. Yee, greatly advanced the art of modeling electromagnetic phenomena. It introduced a stable, efficient computational means of solving Maxwell's equations, which has been widely used ever since. Other electromagnetic simulation modeling capabilities were also developed, such as Livermore's Numerical Electromagnetic Code (NEC), which significantly improved a code originally written elsewhere. NEC remains the world's most widely used code for analyzing antenna performance.

Spin-offs of EMP research have taken Livermore to the forefront of many areas of technology: innovative use of solid-state and low-cost silicon electronics; pulsed-power systems; cross-borehole EM imaging and tomography; and photonics research for the telecommunications industry.



Test activities, such as measurements of electromagnetic coupling to scale-model aircraft in the EMPEROR facility at Livermore, complemented the development of simulation models.

Electromagnetic pulses 1966

Around the Lab



- This 1966 Tapestry event at the Nevada Test Site was part of Operation Flintlock. Tapestry was one of the most heavily instrumented nuclear tests ever conducted by the Lab. Data signals from the explosion moved up and out of the hole through cables. The cables,

in turn, fanned out on the surface to a number of trailers that housed instruments for reading the signals. As a reading flashed across the face of each instrument, a camera snapped its picture.



- The Minuteman I Salvo Launch: February 24, 1966

- Michael M. May is the Lab's director
- Duane C. Sewell is the associate director support
- The number of Lab employees grows to approximately 5400

Around the nation

- Freedom of Information Act passed
- U.S. Surveyor-1 lands on moon
- Black Panthers formed
- National Organization for Women (NOW) formed
- Department of the Interior publishes its first rare and endangered species list



- Star Trek airs on NBC, starring William Shatner and Leonard Nimoy (left)

Around the world

- Brezhnev becomes general secretary
- France withdraws from NATO
- First Chinese nuclear missile tested
- International protest against U.S. policy in Vietnam
- Indira Gandhi, the daughter of Jawaharlal Nehru, is elected as prime minister of India after Lal Bahadur Shastri dies of a heart attack

in other

NEWS

Significant events
around the Lab,
the nation
and the
world

For more of the Lab's rich history, check out the Timeline, located at :
<http://www.llnl.gov/timeline/>



NEWS YOU CAN USE



NIF team gets congratulations on a job safely done

Rep. Ellen Tauscher congratulates Jacobs Facilities employee Clinton Binns during a recent visit to the National Ignition Facility. Tauscher honored the NIF team's milestone of 1 million hours without a lost workday case. Other NIF team members included (from left) John Souza, Pat McDuff, Vincent Mendoza.

JACQUELINE MCBRIDE/TID

Technical Meeting Calendar

Friday
12

INSTITUTE FOR SCIENTIFIC COMPUTING RESEARCH

"An Immersed Interface Method for Incompressible Navier-Stokes Equations," by

Long Lee, University of Washington. 10 a.m., Bldg. 451, room 1025 (uncleared area). Contacts: Petri Fast (CASC) 4-2649, or Leslie Bills, 3-8927.

DEFENSE & NUCLEAR TECHNOLOGIES

"Omega Radiation Experiments: Making Measurements That Matter," by Christina Back, LLNL. 10:30 a.m., Bldg. 132 auditorium, room 1000 (cleared area). Contact: Mark Hermann, 2-6999.

CHEMISTRY & MATERIALS SCIENCE

"In situ Crystalline Phase Reinforced Bulk Glass Matrix Composite in La and Pd based Alloys," by Yi Li, University of Singapore. 11 a.m. Bldg. 235, room 1090 (uncleared area). Contacts: T.G. Nieh, 3-9802, or Kathy Gonzales, 3-7023.

PHYSICS & ADVANCED TECHNOLOGIES

"Spin Physics at HERMES," by Maria Simani, Vrije Universiteit of Amsterdam. 2:30 p.m., Bldg. 211, room 227 (badge required). Contact Doug Wright, 3-2347, or Pat Smith, 2-0920.

INSTITUTE FOR GEOPHYSICS & PLANETARY PHYSICS

"Dynamics of Planetary Rings and Extrasolar Planets," by Eugene Chiang, UC Berkeley. Noon, Bldg. 319, room 205 (badge required). Contacts: Adam Stanford, 3-6013, Josie Morgado, 4-5201.

Monday
15

MATERIALS SCIENCE & TECHNOLOGY

"Novel Materials and Processes for Packaging of Future Microsystems," by Markondeya

Pulugurtha, Georgia Institute of Technology. 10 a.m., Bldg. 235, gold room (uncleared area). Contact: Peter Martin, 3-3394, or Roberta Marino, 3-7865.

UC DAVIS, DEPARTMENT OF APPLIED SCIENCE & METHODS DEVELOPMENT

"Rheology of Complex Fluids," by Siegfried Hess, Technical University of Berlin. 4 p.m.,

Bldg. 661 (Hertz Hall), room 7 (open area). Refreshments served at 3:30 p.m. for a "meet the speaker" session before seminar. Contact: Estelle Miller, 2-9787.

INTEGRATED COMPUTING & COMMUNICATIONS

Mini Macworld with presentations and vendor displays. "Update on OS X and Open Source Development," by Jordan Hubbard, Apple Open Source Engineering; "OS X Security Features and Fundamentals," by John Hurley, Apple Data security manager; "HPC Clustering and Science Applications Ported to OS X," by John Martellaro, Apple marketing manager for science & technology; "OS X Tips & Tricks and Porting Applications," by Ron Ustach, Apple systems engineer. 9 a.m. to 3:30 p.m., Bldg. 543 auditorium. Contacts: Duane Straub, 2-9774, or Candace Gittins, 4-4952.

PHYSICS & ADVANCED TECHNOLOGIES

"Relative S-factor Measurements at TUNL and Evidence for an Excited State at 7.414 MeV in Oxygen-15," by Stephen Nelson, Triangle Universities Nuclear Laboratory, Duke University. 1:30 p.m., Bldg. 211, room 227 (badge required). Contacts: Dennis McNabb, 3-0749, or Pat Smith, 2-0920.

CHEMISTRY & MATERIALS SCIENCE

"Is There REALLY Anything Different About Nanoscaled Materials? (And if so, why?)" by Alexander King, Purdue University and president of the Materials Research Society. 3:30 p.m., Bldg. 235 Gold Room. For information on speaker and abstract information, see http://www-cms.llnl.gov/cms_frontiers_ext/index.html. Contact: Michael Fluss, 3-6665, or Kristine Ramirez, 3-4681.

Tuesday
16

ENERGY & ENVIRONMENT

"Overview of the UC Davis McClellan Nuclear Radiation Center," by Wade Richards and Jake Lefman, UC Davis McClellan

Nuclear Radiation Center. 1:30 p.m., Bldg. 170, rooms 1091, 1092 (uncleared area). Contacts: Doug Vogt, 3-7798, or Christie Crozier, 2-8607.

PHYSICS & ADVANCED TECHNOLOGIES

"Electron-Driven Chemistry," by Thomas N. Rescigno. 2 p.m., Bldg. 123, Conference Room A

(uncleared area). Contacts: Ralph Jacobs, 4-4545, Stefanie Landes, 2-3201.

Thursday
18

H DIVISION

"Status and Prospects of DESY Free-Electron Laser Projects," by Thomas Tschentscher, HASY-LAB at DESY. 10 a.m., Bldg.

123, Conference Room A (badge required). Contacts: Dieter Schneider, 3-5940, or Donna Vercelli, 2-0976.

PHYSICS & ADVANCED TECHNOLOGIES

"Quantum Interferometry with the STAR Time Projection Chamber," by Spencer Klein, LBNL. 1:30 p.m. Bldg. 211, room 227 (badge required). Contacts: Ron Soltz, 3-2647, or Pat Smith, 2-0920.

INSTITUTE FOR GEOPHYSICS & PLANETARY PHYSICS

"High Redshift Radio Galaxies: Search Techniques and Emission Line Properties," by Carlos De Breuck, Institut d'Astrophysique de Paris. Noon, Bldg. 319, room 205 (badge required). Contacts: Wil van Breugel, 2-7195, or Rosemarie Cortez-Kudo, 3-0621.

PHYSICS & ADVANCED TECHNOLOGIES

"A Maximal Information Solar Neutrino Detector," by G. Bonvicini, Wayne State University. 1 p.m., T1726, room 1000 (uncleared area). Contact: Kevin Fournier, 3-6129, or Eryn Davis, 2-0475.

Friday
19

ENERGY & ENVIRONMENT

"Active Load Control for Wind Turbine Blades: A Non-Traditional Microtab Approach," by Dora Nakafuji.

LLNL. 10:30 am, Bldg. 543 auditorium. Contact: Camille Vandermeer, 3-2672.

The deadline for the next Technical Meeting Calendar is noon, Wednesday.

Send your input to tmc-submit@llnl.gov. For information on electronic mail or the news-group llnl.meeting, contact the registrar at registrar@llnl.gov.

NEWS OF NOTE



Admin specialists take time out for networking

More than 200 administrative specialists in the 405 job series spent a day this week getting to know each other, listening to presentations by ADs and participating in several problem-solving exercises and mixers.

"It's fun meeting new people," said Sharon Farmer of Defense & Nuclear Technologies, who had just finished an activity called the human knot. "It's nice finally to meet in person people you only speak with on the phone." One of those people was Angela Walden of EE.

"We're having a good time," Walden added. She came away from the workshop with the feeling that admins "are pretty special and important to the Laboratory. I enjoyed the workshop a lot, but I most enjoyed hearing Jan Tulk and Kinnon Ernst."

The goal of the workshop is to focus on employees in the 400 series and the important work that they do, and to offer them an opportunity to increase their network among the other directorates, said Joni Schuld of the Director's Office.

"This is the fourth year we've done it," said Schuld, who helped start the annual event. "The key is to provide an opportunity for the 400s to get out of the office and participate with other administrative specialists. It's a day for them and it recognizes their value as part of the teams they work in. They're the glue."

The opportunity to network with each other is one of the most important features of the day, said Joyce Ray, who has helped coordinate the workshop for the last couple of years.

"It's invaluable. The 400s don't get a chance to get out and meet one another very often," she said.

For Connie Ruvalcaba-Olson of the



JULIE KORHUMMEL/NEWSLINE

Administrative specialists have been called the "glue" that holds Laboratory offices together. During a two-day workshop, the specialists learned that first-hand during a special exercise known as the "human knot" (left). During the workshop, participants listened to presentations from various associate directors and engaged in various problem-solving exercises. The goal of the workshop is to focus on employees in the 400 series and the work they do.

Laser Science and Engineering Division, the workshop offered a chance to reconnect with people she hadn't seen in a while, as well as meet new people.

"I really enjoyed it. I wasn't sure what to expect, because it was my first week back from maternity leave," she said. "There were a lot of people there. I recognized many names and got to put faces with them. And I got the chance to network with really nice people from other directorates that I may not have met otherwise."

The workshop was expanded to two days this year to accommodate more employees. The same program was offered both days.

Each year, several directorates sponsor the workshop. This year's session was hosted by Computation, Defense & Nuclear Technologies, and Engineering. The people responsible for the event included: Betty Colvin, Becky Frank, Jennifer Petersen, Joyce Ray, Phyllis



KIRSTEN SPROTT/PAO

Schmitt, Joni Schuld, Gay Spivey, Kathy Turnbeaugh and Marsha White.

The program each day featured talks by several associate directors, including Jan Tulk, Dona Crawford, Bruce Goodwin and Glenn Mara.

Comments sought on information architecture standard

The Information Architecture Project has guided the evolution of Lawrence Livermore's information technology infrastructure since 1998. To focus these efforts, the LLNL chief information officer chartered a Labwide IA Advisory Board. Together, the CIO and the IAAB guide the growth of the standards and technical support required to sustain a maturing IT infrastructure.

During the past four months, an IAAB-selected team has researched, evaluated and selected a Windows 2000 Active Directory design that supports the Laboratory's strategic IA goals. Two drivers fuel interest in deploying a single Windows 2000 AD architecture — discontent with the existing LLNL Windows NT deployment, and the expected termination of Windows NT technical support in 2003. The team members also anticipated that careful planning could leverage powerful AD features for the benefit of numerous Laboratory organizations.

The AD architecture team is proposing a standard for the Windows 2000 Active Directory architecture. The team recommends that we deploy Active Directory using a single "forest," multi-domain architecture that enables organiza-



CIO UPDATE

—BY TED MICHELS

tions to join the forest by using either their own programmatic domains, or a programmatic organizational unit within the institutional domain. (A forest is a collection of one or more domains that share common schema and AD infrastructure information.)

This model best meets the strategic goals set by the team, and includes increasing the ability of users to share information securely. Additionally, it will maximize the number of Lab participants. From a DNS namespace perspective, this model has an important advantage for users: It enables Windows 2000 client machines to retain names of the form, x.llnl.gov. By deploying Windows 2000 using this architecture, team members are confident that the Lab can accommodate its large, diverse, and somewhat autonomous computing community.

Windows 2000 AD should benefit users and program administrators because it:

- Enables programs to create a centralized administrative model that provides the ability for distributed control on a divisional or group basis.
- Reduces the cost of desktop computing, by reducing the duplication of effort in PC administration and by automating common desktop management tasks.
- Better enables information sharing, collaboration, and resource availability by allowing data owners to manage access to their data.
- Offers the opportunity to leverage infrastructure services such as 2-factor authentication.
- Allows systems administrators to copy and implement policy published by the institution, thereby decreasing costs associated with security compliance assurance.

To comment on this proposed standard, please see <http://ia.llnl.gov/rfc/ia2301/ia2301.html>. The review period ends at close of business April 29, so comments must be received by that deadline.

Ted Michels is the principal deputy associate director for Computation and the acting LLNL chief information officer (CIO).



CLASSIFIED ADS

See complete classified ad listings at
<https://www-ais.llnl.gov/newsline/ads/>

AUTOMOBILES

1996 - Ford Explorer XLT V8 AWD, gold, 1o miles, leather, loaded, xlnl condition, \$12,000 925-200-9301

2000 - Honda Civic EX 2DR-Power windows, locks, sunroof, custom rims & tires, CD, excellent condition, 26k \$15,175 209-832-2862

1997 - Ford Explorer XLT-4WD, V6SOHC, Fully loaded-dual power seat, window, locks, cassette & 6 CD, etc. clean, 90k \$10,500 209-832-2862

1966 - AC Cobra awesome! Blk/w,3000 original miles, 390 cu,toploader 4sp,9in ford,4 wheel disc,top,etc. B&B factory built. Reg as 66 Cobra. \$31,000 cash 209-835-3352

1979 - DATSUN 280ZX--176,000 miles, good paint job. Runs good. 925-373-7660

1974 - VW Super Beatle. Runs great; just had major service done (new carb, cap, filters, muffler); new front seats. \$1,695 obo.Call evenings 925-443-7412

1986 - BMW 325E, 4 DR, Auto, Very Good Condition except for Clear Coat, Well Maintained, 27 MPG, High Freeway Miles. \$2500. 209-943-2166

2001 - Ford Explorer XLT, V-6, 4x4, 4 dr., Two-Tone Exerlor Sport Package (Blue w/grey), tow package, 17k miles, excellent condition, \$23,995/obo 209-599-1955

1935 - Ford Sedan All original,A1 Condition, Its a Beauty, Price \$18,000.00 209-815-1415

1999 - Chevrolet Camaro, 55k miles, leather, power everything, bra, T-Tops, CD, pewter color, chrome wheels, 72k mile extended warranty, \$14000.00 obo. 209-830-9003

1996 - Ford Explorer XLT, 4WD, 5 Spd stick, Goodyear APT tires, 54,600 miles, excellent condition, \$11K/OBO, includes Yakima sport racks, 925-373-3340

1991 - Chevy Corsica LT. 3.1L V-6, AT, AC, PS, PL, Tilt wheel, Air Bag. No reverse. 130k miles. 2nd owner. \$1,000-O.B.O. 209-833-9687

1994 - Pontiac Grand AM SE 4dr AT, 71k miles, new brakes, new tires, power windows, power lock \$3400. 925-371-5089

1992 - Toyota Celica GT Sport Coupe,teal colored, 5 speed, excellent condition, loaded, 62k miles.Original owner, \$7,800. 925-820-8191

1997 - Geo Metro LSI, 4dr, 4cyl, 121k miles, Dual front air bags, PS, AC, AM/FM/CASS, new tires and battery. \$2400 OBO 209-239-2303

1995 - Nissan 7 passenger mini-van XE. Great condition with A/C, rear air, PS/PW/Pwr Door locks, tilt wheel, cruise, AM/FM/Cassette., and more. \$6720.00 OBO 209-824-8750

1992 - Toyota Pasal AT,AC,new tires, ally wheels Sun roof. 117k miles \$3650 or BO. 209-529-1239

1962 - Mercedes Benz 220S, fair shape with original parts. Ran well in March but now water in cylinders, gasket? Selling whole for parts. You tow. \$550. 925-455-6089

2000 - Kia Spectra. Beautiful blue Paint. 16k hwy miles. 5 door hatchback. AM/FM Tape, A/C, Keyless Entry. Great Commuter Car. Asking 10,000.00 925-525-0793

1986 - Honda Accord DX, 5 speed, 2-dr, hatchback, 133K miles, excellent running condiiton, \$2000. 925-447-2684

1995 - Honda Accord LX, auto, air, AM/FM/cassette, champagne color, little old lady car with under 22K miles, \$8000. 925-362-9078

1985 - Chevy Suburban (diesel

engine)180,000 mi. Started restoration, sacrafice at 1,200 or BO. 209-956-3718

1995 - Beautifully kept Nissan Maxima, leather interior, must see. 925-938-6789

1985 - Jag XJ6 Vanden Excellent condi-tion asking \$4000.00 209-962-5468

AUTOMOBILE ACCESSORIES

Gear Vendors Overdrive. Brand New GV-3DO375 Overdrive Unit. Still in box. Fits Long Shaft TH-400. Can be adapted to other applications. \$1500 925-932-3794

TRUCK-SHELL, GEM-TOP, RED like new, tinted & locking windows, one side slides, other side lifts, \$1,300.00 NEW, asking 500.00 209-529-0431

FLARED FENDERS for Dodge Truck RED w/all fasteners over \$500.00 NEW,asking \$200.00 209-529-0431

JOEY-BED,Truck Bed Slider,makes reaching items a BREEZE. \$850.00 NEW,asking \$450.00 209-529-0431

Bed liner: Ford factory liner from 2002 F-350. excel cond. \$125 925-634-6273

JEEP TJ Targa HARDTOP by steel-horseautomotive.com. Tan w/grey interior. \$1,400 new, first \$600 takes it. 925-980-8896

Vista Truck Shell, 8 ft., like new, sliding glass windows, carpet and lights. \$600.00 OBO 925-449-4736

BOATS

12ft Elgin Boat/trailer, 10h motor.\$400, 209-576-4078

1997 Yamaha Wave Venture, runs great, low miles and hours, \$5,000 OBO, call for details 209-834-1238

Furuno model 1720 marine radar. 7 inch CRT display, 0.25-16 mile range, 16 inch dia raydome. \$700.00 925-455-0859

1994 Sea Ray Signature, 20' cuddy cabin, Mercury cruiser, 198 hp, low hours, full canvas. 9925-634-8464.

ELECTRONIC EQUIPMENT

COMPUTER DESK, portable, oak fin-ish. \$35 or best offer. 925-447-2905

Sony Viao computer, 200 MHz Pentium processor, 32 MB RAM, Monitor w/speakers & woofer built in, Keyboard, mouse, & original software pkg. \$400 925-606-1735

Amateur Antenna - Tri-band beam and crank-up tower. \$50. 925-938-6789

GIVEAWAY

Give away working 13 year old Hot Point Washer & Dryer. 925-828-3622

Coca Cola Vending Machine (cans) - free - needs freon and cleaning - you haul 925-449-4646

Queen dark wood heavy headboard unit with 2 drawers and center book-shelf. Top needs refinishing (cat scratch-es). 925-455-6089

HOUSEHOLD

Entertainment Center, Solid Oak, 56w x 48h x 21d. TV area 26 x 26 w/doors, Separate audio area w/glass doors. Storage drawers \$200.00 925-447-1578

Over 12 dozen assorted canning jars. Asking \$20.00 510-582-2938

Microwave/convection oven w/vent fan. GE over-the-range wall mount. Near new, used ~10 times in orig car-ton. \$375 925-447-6728

7 Drawer Dresser w/large Mirror and 2 Drawer Nightstand. \$100 for Dresser, \$25 for Nightstand, or \$100 for both or best offer. in good shape. 925-455-6310

Sears 15 cubic foot chest freezer. White with locking door. \$150.00 OBO 925-371-8111

Cedar patio loveseat glider, \$50. 925-454-9291

OAK Dining room table one leaf and four chairs. \$200 925-447-4797

Used lawn mower, gas powered, walk behind - \$75/obo 925-449-4646

WASHER/DRYER Stackable. Very good condition and in excellent working condition. 350.00 . Manteca (209)239-3347 or 209-578-5257

Refrigerator, Amana 20 c.f., energy sav-ing, almond, great condition, \$250 925-513-1934

Refrigerator/Freezer- good working con-dition, Almond, \$100 OBO 209-239-2303

BABY crib and changing table good cond.with pads \$75, wood cabinet for holding prints 44w x26d x36h 8 draw-ers \$50 925-371-1465

Oasis Water Cooler for 6 gallon bottles, brown, wood-grain look. Very clean and works perfectly. \$35.00 925-443-1673

Antique solid mahogany chairs (2) refinished new uph. grean weave. \$40 each. Orig. ET doll with tag, \$15. Purple Rose Carnival glass bowl 60s, \$25. 925-449-3152

MICROWAVE, Sharp Carousel 1200 Watt, 1.6 cu ft . Less than 1yr old, works great. White \$50 209-836-4361

GARAGE SALE, SATURDAY, APRIL 13, 9:00 TO 3:00, 965 VENUS WAY, LIV-ERMORE. Furniture, collectibles, cloth-ing, housewares, sports equipment, BBQ etc. 925-455-0437

MISCELLANEOUS

MOVING SALE - Sunday, April 14 8:00am-3:00pm 1074 Bellflower Street in Livermore. Bikes, clothes, furniture, toys, books, computer games, etc. 925-373-7664

40 inch round folding leaf (24 in x 40 in folded) table and 2 chairs. Green and Natural color. \$150.00 OBO 925-371-8111

Yardman Riding Mower from Sears. Still has 1 Year warranty. Like new. Hardly used. \$800 or best offer. 925-455-6310

YARD SALE Apr 12 & 13, 9AM to 3PM, 2628 Kennedy St. Livermore, nice things, come see, everyone welcome. 925-447-6192

27 inch Fisher color stereo TV \$60/BO. Epson Stylus Color printer w/toner cart. \$20/BO. Both in good working condi-tion. 209-295-7007

50 Used 12ft 3-legged wooden picking ladders in good condition. \$20.00 each. Bpr#01153 or 209-892-6993

Stihl gasoline powered string trimmer (weed eater) model FS48. \$75.00 925-455-0859

Leather Coat, full length, size 16, Wine color. New. \$55.00. Call after 5:00pm. 925-449-0430

Janome Memory Craft 4000, 167 stitch designs, attachments/walking foot for quilting, 4 yrs new, orig cost \$1400, asking \$750. 209-832-3880

MOTORCYCLES

2000 - Yamaha Quad YFM80 Badger. White/Blue. Like new. Ridden very little (20 hours). \$2050 or BO. 209-832-8515

1997 - Yamaha PW50, runs good, good starter bike, \$800.00 925-829-1249

1998 - HD 1200 XLH Sportster,new chrome pipes,rejetted carbs,king and queen seat,saddlebags.\$8500.FIRM 530-644-7820

MUSIC INSTRUMENTS

Gibson Banjo RB4 with case \$1850.

Bones,1 set, with instruction video \$35. 925-634-2701

PETS & SUPPLIES

30 gal. aquarium w/pumps, filter & rocks. All it needs is fish and water! \$75.00 OBO 925-455-8971

Lab puppies, AKC,ready April 21st call 209-547-1200 8-5 pm or nights 7-9 pm at 916-685-7470 Asking 350.00 209-547-1200

RECREATION EQUIPMENT

Golf Clubs - Womens Spalding Pro Impact with Taylor bag and pull cart. New condition. \$100 925-256-9411

RIDESHARING

xpress your commute, call 2-RIDE for more information or visit <http://www-r.llnl.gov/tsmp>.

Modesto - Carpool,Modesto to LLNL Time flexible. ext. 209-522-7136, ext. 3-3575

Antioch, Brentwood, Oakley - Vanpool has seats available. Beat the bus in time and cost! 7:45-4:30. 925-625-0534, ext. 2-2174

Danville - Camino Tassajara & Crew canyon (near Blackhawk) - 2 drivers/rid-ers seeking additional members to car-pool from south Danville area. 8:00 - 4:45 925-736-9441, ext. 2-1039

Walnut Creek - Concord, Pleasant Hill new luxury vanpool has an opening. 8:00 to 4:45. 925-945-4926, ext. 2-2805

Patterson - Vanpool. Seats are available. Work hours 7:30-4. 209-892-2118, ext. 2-9502

Manteca - Rider/Driver needed for 4 person carpool. Arrive LLNL 7:45AM, Lv 4:30PM. Drive 1 day per week and 1 Friday a month. Very flexible. 209-823-5085, ext. 2-0643

SERVICES

JEWELRY-Beautiful custom designed jewelry. Weddings, Proms, special events. Designed to your colors and needs. 925-606-0711

FLOORING - Carpet, linoleum, wood laminates. 27 yrs experience, licensed/bonded/insured, reasonable rates. 925-516-9510

Roofing, 28 yrs experience, fully insured, free estimates 925-454-9200

Wood Fences. Demolition and/or New Construction. Treatment only, also avail-able. Free Estimates. 925-449-0130

House Painting - Exterior & Interior. Over 16 years experience. Call for free estimate. 209-956-3718

Wedding Photography.: Over 20 years exp. Medium format cameras used. You keep the negatives. Reasonable prices. 925-829-1474

SHARED HOUSING

Livermore - - Furnished rm. avail. in 3 bd. home. 15 minutes from Lab on southside. Swimming pool; all privi-leges, clean, no pets/smoking. 1/3 util. \$600/month. 925-989-4131

Livermore - Furnished room w/own bath in clean home 4 mi from Lab.Full privileges.N/S N/P \$600 inc util 925-449-8034

TO TRADE

Interested in exchanging painting ser-vices for a small commute car for col-lege student. 209-956-3718

1993 - 93 Ford Ranger Extended Cab, 5spd, 133,000 miles with tow package, looks and runs great! \$4000.00 or BO 209-543-8155

TRUCKS & TRAILERS

1995 - CHEVY S-10 LS Extended Cab. 128,000 miles. 5-speed, A/C, PS, Sony AM/FM/CD, bed liner. Minor body damage. \$4250.00 925-371-8111

2000 - Starcraft Starflyer Tent Trailer. Sleeps 6, refrig., forced air heat, awning, gas or electric connection. Used 3 times. \$6,000. 925-524-9381

1995 - Toyota Tacoma extended cab, A/C, Auto,Tilt Wheel. 76K miles one owner.exellent condition.\$9500 OBO. Pg. 02734 209-824-0227

Car dolly/kartote, economy to van size. tie down straps, ratchet winch-es, swivel bed, full fenders, mag lite set, always garaged, exc cond \$600 925-443-9235

1974 - Tent Trailer, Wards. Sleeps six. Slide out kitchen. Old but usable. Best offer. 925-443-6829

1999 - Chev Silverado 1/2T PU ext cab-short bed LS model,4x4,tow pkg., bed liner, dual exhaust, new tires,60K miles-10K left on GM war-ranty 20,300 obo 510-881-8536

1986 - Ford 3/4 Ton 6.9 diesel 97000miles,Very nice inside/out. \$5800 obo. 209-239-2812

1996 - Toyota Tacoma- Xtra cab, 4 cyl, 5 spd, liner, rear slider, new tires, CD, AC, 140K miles, runs great. \$6000 obo. 209-982-0692

1950 - Ford pickup 351W. P.S., P.B., torsion bar suspension, Edelbrock W/750 Holley, Dart II Heads, and much more. \$11,500 OBO 209-836-9035

1987 - GMC 2500 3+3 crew cab long bed 6.2L Diesel. 190K miles, New clutch, Runs Fastastic, very reli-able. AM/FM/CD \$3500/obo 209-892-5734

1997 - GMC 1500 Pickup Club Short Bed, 34K miles, Hard Tonneau Cover, tow pkg, chrome pipes, AR wheels, \$16K or BO 925-449-3478

1995 - Motorhome Thor Residency 36 feet,disel cummins, excel condi-tion. low mi, \$57,000 call after 5:00pm 925-449-0430

1987 - Red Ford F150 2W, V6, Regular Cab, 8ft Bed, 4sp Manual, Camper Shell, Carpet Kit, PS, A/C, AM/FM, ABS, Towing, 112K, Runs Great, \$3000 OBO. 925-640-3916

VACATION RENTALS

Maui, Wailea Ekahi - luxury condo, 1 bdrm, 2 bath, available May, June. Cabin in Arnold, CA, available May, June, August. 510-582-9262

HAENA, KAUAI - - Private house and/or studio on the scenic north coast near Hanalei Bay - this is the real Hawaii! House-\$125/day, stu-dio-\$75/day. 831-479-3441

SOUTH LAKE TAHOE - 3 Bedroom 2 bath Chalet, newly remodeled, nicely furnished,all amenities,offsea-son rates now in effect, Reserve Now for Summer! 209-599-4644

Maui, HI - Kahana Reef oceanfront 1BR/1BA condominium. Beautiful two-island view, oceanside pool, and BBQs. Low LLNL rates for year-round reservations. 925-449-0761

WANTED

Looking for a used 20 inch girls bike in good condition. 925-447-9647

Looking to buy a home (>1500 sq ft.) in Livermore. No cats must have lived there (dogs ok). Not interested in condos or townhouses. 925-447-1676

Fountain for garden area. 925-443-4413

AROUND THE LAB



BRIEFLY

Katz to speak about Holocaust

Robert Katz, member of the South Bay Holocaust Survivors' Group and the Jewish Partisans' Education Foundation, will present "Triumph of the Human Spirit: The Story of the Jewish Military Resistance in WWII," at noon Thursday, April 25, in the Bldg. 543 auditorium.

Katz is the product of an American military family and the relative of Holocaust survivors. He lectures extensively across the country on a variety of topics, including the Jewish Resistance and current events in the Middle East. In honor of Yom Hashoah, Holocaust Remembrance Day, Katz will speak to remember those who suffered, those who fought, and those who died.

The talk is sponsored by the Safety, Security and Environmental Protection Directorate. All LLNL and Sandia employees and contractors and DOE personnel are invited to attend.

Caring for intellectual property

Intellectual Property 101 will be the next in a series of luncheon seminars held at the TTEC facility at the Laboratory. The seminar takes place at 12:15 p.m. Tuesday, April 16.

Improper care of intellectual property has been the downfall of many start-up technology companies in recent years. There are no shortcuts; continual vigilance is required.

Everitt Beers and Kevin Martin — lawyers with the Pleasanton firm of McNichols Randick O'Dea & Tooliatos — will be conducting the seminar.

Beers is a patent and intellectual property law litigator who also has experience in intellectual property transactions and licensing. His practice areas include patent, copyright, trade secret, unfair competition, and trademark law. Prior to joining the Pleasanton firm, he was a partner in the Palo Alto office of Oppenheimer Wolff & Donnelly. Beers is a registered patent attorney with a technical background in computer science and engineering, including computer software and hardware, Internet and ecommerce technologies.

Martin has been practicing intellectual property law, business and real estate law in and around the San Francisco Bay area



Robert Katz

since 1994. His practice focuses on intellectual property litigation and transactions, including trademark prosecution and litigation, copyright and patent matters. His experience includes federal and state trials, binding and non-binding arbitration, mediations and settlement negotiations before the United States Trademark Trial and Appeals Board. He is also an instructor of business and intellectual property law with the Northern California campuses of the University of Phoenix.

Please contact Heather Michaels at TTEC, 371-8651, to attend this event. Seating is limited.

Portions of Vasco closed

South Vasco Road, between East Avenue and Tesla Road, is scheduled for closure beginning Monday, April 15.

The closure is part of a city project to widen portions of the road. The project is expected to last approximately three weeks. Employees using this area to get to and from the Laboratory will need to detour from Tesla to Greenville Road to gain access to East Avenue and Vasco Road. Bike riders and pedestrians are advised to use caution when approaching the outskirts of the work site, as equipment and construction vehicles will be moving in and out of the area.

At the same time, work continues on portions of Vasco Road between Patterson Pass and Naylor Avenue. Construction crews are resurfacing northbound and southbound lanes. As a result, lane closures in the southbound area will take place between 9 a.m. and 5 p.m.; northbound lanes will be restricted between 7:30 a.m. and 3:30 p.m. Between 9 a.m. and 3:30 p.m., one lane may be closed in each direction.

Starting today, one lane of traffic will be closed on a continuous basis for four week-ends, in order to install reinforced concrete approach slabs to the railroad overpass. Closures will begin after peak commute traffic on Fridays and end prior to peak commute traffic on Mondays.

Military pay supplement proposal

The University of California has proposed extending the supplement to military

pay for UC employees who volunteer or are called to active military duty during Operation Enduring Freedom or Operation Noble Eagle from the current 180 calendar days to 365 calendar days.

Last fall, the DOE approved a modification to Appendix A to Contract 48 authorizing LLNL to grant pay for military leave in accordance with UC policy. If UC does extend the supplement as proposed, it would therefore apply to eligible LLNL employees. Also, the Lab has received authorization from DOE and from UC to compute the supplement to military pay for UC employees who are LLNL employees in accordance with DOE guidance issued in February 2002. This would allow the Lab to exclude subsistence, housing, travel and uniform allowances from military compensation when determining eligibility for and computing the supplement.

Currently, the Lab follows UC guidance under which these allowances must be added to military compensation. Any comments or questions on these proposals should be directed to Virginia George at L-708 or george13@llnl.gov no later than April 15.

Emergency preparedness course

EM0001-W Emergency Preparedness, mandated by DOE, covers the basics that all employees need to know to prepare for an emergency at the Laboratory. The course is required one time only for all employees, contractors, and workers at the Laboratory. The compliance date for this course is May 31.

The URL for this course is: <http://www-hctrain.llnl.gov/SET/EM0001/EM1001.html>.

Individuals who do not have computer access should contact their training coordinator to obtain a printed version of the course and test. Coordinators will forward completed tests to Hazards Control at L-386.

A read-only version of the course can be downloaded. To complete the course and receive LTRAIN credit, individuals who download this version must return to the Website to take the test online. Anyone experiencing technical problems when taking this course on their computer should contact Bob Gould at 2-7186.

FUSION

Continued from page 1

ate the pulses. The goals are to develop ion sources through high voltage pulses and the flexibility to install a variety of sources and accelerating structures.

The first source experiments will begin in May, according to project manager Larry Ahle.

At first glance, the STS-500 looks like something out of a 1950s science fiction film. But to the trained eye, the machine consists of a high-

voltage dome, insulator column, a diagnostic tank, a transformer and a pulse forming network tank.

Working with scientists from Lawrence Berkeley and the Princeton Plasma Physics laboratories, LLNL physicists hope to test two sources with the new injector test stand: a surface ionization source and a gas plasma source.

"It will be 20 to 30 years before this technology is ready for a commercial application," Ahle said.

The STS-500 will allow experiments on aperturing high-current beams, high electric-field gra-

dient insulators, beam-beam effects and merging, and long pulse width beam physics issues.

One experiment will involve a multiple beamlet source in which many milliamp beams are extracted and transported individually before being merged, creating a 1 amp beam.

A heavy ion fusion driver, necessary for a power plant, would require at least 100 beams to generate the amount of energy needed to run a plant. For now, Lab physicists are trying to provide a source for each beam.

Ahle said the test stand is unique because of the rise time and width of the pulse.



THE BACK PAGE

MATERIALS

Continued from page 1

our community is ideally poised to have a significant impact on the way in which science and technology will help solve one of the most important and pressing issues of our time: the fight against terrorism and weapons of mass destruction," he said.

"The events of September 11 dramatically changed the way in which we view the world around us. The challenges are enormous, and the science community has an opportunity, indeed it has a responsibility, to play a key role in helping minimize and, where possible, to eliminate this threat."

While the attacks of September 11 immediately brought terrorism to the forefront of public concern, Wadsworth pointed out terrorism, even in the United States, is not new and that national security labs such as Livermore have been working to counter terrorists "for many years."

"Livermore, Los Alamos and Sandia national labs have been at the forefront of the war against terrorism for at least a decade," he said. "As national security laboratories, our broad charter is to provide the U.S. government with the technology and expertise required to prevent the spread and use of weapons of mass destruction."

The result of this experience in counterterrorism was that the national labs were able to respond immediately in the wake of September 11 by deploying detection and sensing technologies and providing forensic expertise, notably following the distribution of letters containing anthrax.

Wadsworth said the Lab-developed micro-impulse radar (MIR) was used in the search for survivors in the ruins of the World Trade Center and the Hyperspectral Infrared Imaging Spectrometer (HIRIS), an airborne infrared detection system, was also used over ground zero to identify any harmful chemicals or gases that might have impaired rescue efforts.

The threats of principal concern in the wake of attacks on New York and Washington, D.C. include biological, chemical, conventional explosives as well as nuclear and radiological weapons and materials, he said. "Irrespective of the nature of the threat, the



During the Materials Research Society conference, Deputy Director Jeff Wadsworth (left) met with Alex King, president of MRS.

methodology for developing a defense against terrorism and weapons of mass destruction (WMD) requires a systematic and quite broad approach – there are no silver bullets."

While much remains to be done to meet current as well as evolving threats, the national labs have responded to September events by deploying proven technologies as well as those still under development, according to Wadsworth.

Examples include the biological aerosol sentry and information system (BASIS), a system developed by Livermore and Los Alamos to detect biological agents, which was deployed in Salt Lake City for the 2002 Winter Olympics and projects to inspect shipping containers.

Wadsworth said smaller, faster and cheaper detection systems will soon be enlisted in the war on terrorism, among them the automated pathogen detection system, an automated biological agent smoke alarm; the hand-held advanced nucleic analyzer, a portable instrument for rapidly analyzing samples now undergoing commercialization; and a deployable aerosol time-of-flight mass spectrometer used by the Florida Department of Health to screen mail.

Detection and sensing technologies used to combat the spread of chemical, nuclear and radiological threats also were covered in his presentation.

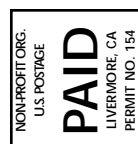
Coordinating a national counterterrorism effort is a political challenge, Wadsworth said. "Not surprisingly, the short-term reaction in the national counterterrorism scene is to want immediate solutions; and operational issues dominate long-term investments in the underpinning science and technology needed for advanced concepts."

Responsibilities for counterterrorism are spread across numerous federal agencies, he noted. "Central control is unclear, and up to now, counterterrorism has been no single agency's first mission. The creation of the Office of Homeland Security is one attempt to provide clarification and leadership, but it will take time to create long-term order out of the current activities."

"The issue of agency ownership is of course important to the R&D community, because we need to know who has responsibility and resources to invest in new science and technology initiatives and ideas," Wadsworth said. "There is also the fact that some legislators and political leaders are hopeful that science investments are not in fact necessary because of the long-term implications of such investments. Rather, they hope that the use of existing science will be sufficient to allow the required technology developments. It is also difficult to prioritize the areas on which to work — this is because the present challenges represent choices amongst rare events with high consequences."

"I believe, however, that science not only has played, but will continue to play, a compelling role in the world of counterterrorism. The current desire for immediate technological solutions is quite understandable," he said. "But the need for investments in high-risk, high pay-off science projects will become apparent, and the need for fundamental, multidisciplinary work to underpin future counterterrorism activities will also become evident."

"The MRS is uniquely placed, because of its agile nature and intrinsically multidisciplinary foundation, to make major contributions," Wadsworth said in concluding his talk. "Sessions such as those held this week illustrate the leadership that will make the war against terrorism a successful one."



Lab grad student wins the silver



Graduate student Christoph Bostedt (right) receives the Materials Research Society's Silver Award from outgoing president Martin Green (left) at the society's Fall 2001 meeting. Affiliated with the University of Hamburg in Germany, Bostedt is a graduate student in LLNL's Materials Science and Technology Division. MRS Graduate Student Awards are highly competitive and are intended to honor and encourage graduate students whose academic achievements and current materials research show a high order of excellence and distinction.

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